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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/654,313

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT

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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/654,313	Applicant(s) GUIDASH, ROBERT M.	
	Examiner LUONG T. NGUYEN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6,9-14,16,19 and 20 is/are allowed.
- 6) ☒ Claim(s) 8,17-18,21-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/04/2008 has been entered.

Response to Arguments

2. Applicant's arguments filed on 12/04/2008 have been fully considered but they are not persuasive.

In re pages 7-8, Applicant argues that Morris does not teaches the output signal values have signals that are generated from pixels within at least two physically separate rows within the array.

In response, regarding claims 8 and 17, the Applicant recited claims 8 and 17 with limitation “wherein the output signal values have signals that are generated from pixels within at least two physically separate rows within the array.” The Examiner considers that claims 8 and 17 as recited still do not distinguish from Morris et al. Morris et al. discloses row decoder 121 provides output signal to select rows of pixel sensing unit 118 for reading out signal value, figure 5, column 7, lines 9-31. Morris et al. also discloses the decoder 121 retrieves the stored

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indications of the intensities from pixel sensing units 118 by selectively selecting rows of the pixel sensing units 118, figure 5, column 7, lines 9 - 31. Noted that the signal values that are generated from the array of pixel sensing units 118 (plurality of groups of 2x2 pixels 113, each group of 2x2 pixel comprises two rows), which corresponds to the output signal values have signals that are generated from pixels within at least two physically separate rows within the array, are transferred to output interface 128, figure 5, column 7, lines 9-31.

In re pages 7-8, Applicant argues that Morris (figure 5) does teach or suggest routing each signal line to pixels in two adjacent rows.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *having a signal line routed to pixels in two adjacent rows*) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In this case, regarding claims 8 and 17, the Applicant recited claims 8 and 17 with limitation "wherein the output signal values have signals that are generated from pixels within at least two physically separate rows within the array." The Examiner considers that claims 8 and 17 as recited still do not distinguish from Morris et al. as discussed above.

Claim Objections

3. Claims 1-6, 9-14, 16, 19, 20 are objected to because of the following informalities:

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Claim 1 (line 14), claim 9 (line 17), “at least one slow pixel” should be changed to --the at least one slow pixel--.

Claim 1 (lines 15-16), claim 9 (line 19), “at least one fast pixel” should be changed to --the at least one fast pixel--.

Claims 2-6, 19 are objected as being dependent on claim 1.

Claims 10-14, 16, 20 are objected as being dependent on claim 9.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 8, 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Morris et al. (US 6,665,010).

Regarding claims 8, 17, Morris et al. discloses a camera (digital camera 12, figure 1, column 1, lines 8-20) comprising:

an image sensor (digital imager 140, figure 5) comprising:

a plurality of pixels arranged in an array of rows and columns (an array of pixel sensing unit 118, figure 5, column 3, lines 5-30);

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a readout mechanism that provides a series of output signal values associated with a row sync signal with a number of data signal values corresponding to a number of pixels in a row or desired portion of a row (row decoder 121 provides output signal to select rows of pixel sensing unit 118 for reading out signal value, figure 5, column 7, lines 9-31);

wherein the output signal values have signals that are generated from pixels within at least two physically separate rows within the array (the signal values that are generated from the array of pixel sensing units 118 are transferred to output interface 128, figure 5, column 7, lines 9-31). Noted that the signal values that are generated from the array of pixel sensing units 118 (plurality of groups of 2x2 pixels 113, each group of 2x2 pixel comprises two rows), which corresponds to the output signal values have signals that are generated from pixels within at least two physically separate rows within the array, are transferred to output interface 128, figure 5, column 7, lines 9-31.

Regarding claim 18, Morris et al. discloses the data values are reconstructed in the camera memory (the signals that are readout from imager 140 are stored in memory 263, figure 12, column 7, lines 37-49).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al. (US 6,665,010) in view of Abe (US 6,747,698).

Regarding claim 21 Morris et al. discloses a color filter pattern (one group of pixels is associated with red color or green color, figure 5, column 3, lines 30-52) spanning at least a portion of the pixels, wherein the color filter pattern forms a plurality of color filter kernels (group of four pixels 113a, 113b, 113c, 113d, one group has red pixel color, another group has green pixel color, figure 5, column 3, lines 5-40) wherein the color filter kernels are arranged in at least two different uniformly distributed sets that are correlated with the color filter pattern (each group of pixels includes 2x2 pixels, figure 5, column 3, lines 5-40).

Morris et al. fails to specifically disclose the plurality of color filter kernels having at least one color of every color in the color filter pattern in a predetermined arrangement with an identical pattern of colors in each color filter kernel. However, Abe teaches a digital camera 10 in which the color filter 13 is divided into a 2x2 pixel matrix M1, each pixel matrix M1 has the same plurality of colors R, G, B (figure 2, column 3, lines 51-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Morris et al. by the teaching of Abe in order to reduce the chromatic blur which occurs in a reproduced image because of the interpolating process (column 1, lines 40-43).

Regarding claim 22, Morris et al. discloses wherein the color filter pattern is a 2x2 kernel (group of four pixels, figure 5, column 3, lines 5-30) and an integration time pattern is an alternating pattern of two lines at one integration time and adjacent two lines at a second

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integration time (the integration interval of each group of pixels 113a, 113b, 113c, 113d are different, column 3, lines 5-30).

Allowable Subject Matter

8. Claims 1-6, 9-14, 16, 19, 20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 1 and 9, the prior art of the record fails to show or fairly suggest an image sensor as claimed in claim 1 or a camera as claimed in claim 9 comprising:

a mechanism for independent control of controlling an integration time of each color filter kernel according to its spatial location, wherein at least one color filter kernel includes at least one fast pixel having a first integration time and at least one slow pixel having a second integration time, wherein the first integration time is longer than the second integration time and data from at least one slow pixel includes valid signal level information with adequate signal to noise ratio while data from at least one fast pixel does not contain valid signal level information.

Claims 2-6, 19 are allowed for the reasons given in claim 1.

Claims 10-14, 16, 20 are allowed for the reasons given in claim 9.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LTN
12/22/08

/LUONG T NGUYEN/
Examiner, Art Unit 2622